

Reimagining the Management of Telco Supply Chain with Blockchain

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Abstract : Traditional supply chain silos still exist today due to the difficulty of establishing trust between various partners and technological barriers across industries. Companies lose opportunities and revenue and inadvertently make poor business decisions resulting in further challenges. Blockchain technology can bring a new level of transparency through sharing information with a distributed ledger in a decentralized manner that creates a basis of trust for business. Blockchain is a loosely coupled, hub-style communication network in which trading partners can work indirectly with each other for simpler integration, but they work together through the orchestration of their supply chain operations under a coherent process that is developed jointly. A Blockchain increases efficiencies, lowers costs, and improves interoperability to strengthen and automate the supply chain management process while all partners share the risk. Blockchain ledger is built to track inventory lifecycle for supply chain transparency and keeps a journal of inventory movement for real-time reconciliation. State design patterns are used to capture the life cycle (behavior) of inventory management as a state machine for a common, transparent and coherent process which creates an opportunity for trading partners to become more responsive in terms of changes or improvements in process, reconcile discrepancies, and comply with internal governance and external regulations. It enables end-to-end, inter-company visibility at the unit level for more accurate demand planning with better insight into order fulfillment and replenishment.

Keywords : supply chain management, inventory trace-ability, perpetual inventory system, inventory lifecycle, blockchain, inventory consignment, supply chain transparency, digital thread, demand planning, hyper ledger fabric

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